Implementing Cohort Review in Washington State

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Background

The cohort review method has been synonymous with New York City and its successful increase in TB treatment completion rates, which over time has contributed to a sustained reduction in the number of TB cases. Starting in 2002, the Washington (WA) State Department of Health TB Program explored the feasibility of implementing cohort review at the state level. Foremost in the minds of program staff was the question: Why should this challenge be taken on when we are already swamped with other work and are already doing a pretty good job with oversight of our cases? The methods, including staff motivation, which were used to take on this challenge will be described in this article. In a subsequent article, lessons learned and the outcomes stemming from implementation of cohort review in WA State will be discussed.

General Information about the Cohort Review Process in New York City

Cohort review is a systematic review of patients with tuberculosis (TB) disease and their contacts. A "cohort" of patients from a specific period of time (usually 3 months) is reviewed in terms of individual patient outcomes and program performance. Thus it is a management process used to motivate staff, identify program strengths and weaknesses, determine staff training and professional education needs, and hold staff accountable for completion of treatment for both TB disease and latent TB infection (LTBI).

Case managers know that their day-to-day efforts will be reflected in the cohort review several months later and that they are accountable for the services they provide. The review also allows clinical staff to ask expert clinicians and managers about patient care. Most important, when cohort reviews are being conducted, patients are less likely to "fall through the cracks" and receive inadequate care. Since cohort reviews began in New York City, the treatment completion rate there has increased from less than 50% to 93%. The components of the cohort review process are highlighted below.

- Case management – Every patient reported as a TB case is assigned to a case manager, whether he or she is seen at a health department clinic or in the private sector. Case managers are responsible for ensuring that patients adhere to treatment, comply with medical visits, and complete treatment. Case managers are also responsible for making sure that contacts are identified and evaluated, and complete treatment for LTBI, if appropriate.

- TB registry – Each patient's case is documented in a computerized database of information about all persons with suspected or confirmed TB disease and their contacts. This could be the TB Information Management System (TIMS) or a locally developed database, which gives the "universe" or cohort of patients to be reviewed.

- Supervision and teamwork – Supervisors provide timely review and assistance to the health team. Through periodic reviews, they make sure there are no loose ends in managing each case. Case managers coordinate efforts of the clinical team and the outreach workers who identify contacts, do skin testing in the field, refer infected contacts to clinics, and return missing patients to service.

- Preparation – Supervisors and case managers prepare the case reviews to be presented by participating in biweekly reviews and a 2-month review by the medical manager. These periodic reviews ensure that all the case details are in place, from initial interview to compliance with and completion of treatment to contact investigation. Staff also get a chance to develop their presentation skills.

- Presentation – Case managers follow a specific format in presenting detailed information about each case (demographics, site of disease, bacteriology, radiology, treatment, adherence, completion, contact investigation). The director and medical manager have an opportunity to ask pertinent questions, which are clarified by the case manager, supervisors, or colleagues.

- Review – Based on the case reviews, data about outcomes and programmatic indicators are tallied manually or by spreadsheet. The results are summarized to provide a "report card" for that quarter's TB control efforts.

- Follow-up – After the cohort review session, staff update the registry, address problems that were identified, prepare a summary report for managers, provide medical consultation as needed, and develop staff training if such needs were indicated.

Why Cohort Review in WA State

Cohort review has been successful in New York City, but are there enough compelling reasons for implementing it in Washington State? Would it make a difference in a medium-morbidity setting that is geographically much larger than one metropolitan jurisdiction? Would it be a huge effort to undertake -- and for what gain? All of these questions were discussed and debated before the decision was made to begin implementation of this process.

In 2002, WA State reported 252 cases with a case rate of 4.1 per 100,000 persons, representing a 5% decrease in the state case rate as compared with 2001 (4.3 per 100,000). In addition to the WA State TB Program Manager, there are two Nursing Consultants who are responsible for oversight of cases in the northern and southern regions of the state. The Nursing Consultants provide oversight of TB cases and technical consultation to the local health jurisdiction staff who provide direct management of TB cases. Oversight is not provided by the Nursing Consultants for the TB Program in Seattle & King County, which has a large separate program with a TB Program Director, TB Program Manager, Nurse Supervisor, and six nurse case managers. Seattle & King County by itself has approximately 160 cases a year.

The WA State TB Program Manager and one of the Nursing Consultants had attended cohort review presentations and observed cohort review in action. Both were very interested in using this method at the state level with the goal of eventually involving local health jurisdiction nurses who provide direct TB case management. Their excitement and enthusiasm was helpful in convincing other staff that this process would confer benefits, even if it might be time

consuming.

We concluded that there were many positive reasons for implementing cohort review in WA State. Adopting this method would assist in improving treatment completion; Washington State's completion of therapy rate had been 95% in 1997 but dropped to 89% in 2001. Our goal is to maintain or exceed the national objective of 90% completion of therapy in WA State.

Only 68% of infected contacts 15 years of age and older initiated treatment for LTBI in 2001 and 67% completed treatment in 2000 in WA State. Thus, another compelling reason to implement cohort review was to improve rates of initiation and completion of treatment of LTBI, especially for infected contacts 15 years of age and older, in order to meet national TB program objectives.

With planning and discussions about the 2005 CDC Cooperative Agreements starting in 2002, we thought cohort review would be imperative for ensuring that cases and contacts are appropriately and effectively followed from initiation of screening to completion of therapy. State programs will be evaluated based on performance and achievement of national and state objectives. Implementing cohort review in WA State, in addition to improving case management, will be very useful for program evaluation.

After numerous discussions, staff agreed that this was a worthwhile effort for improving case management, ensuring completion of therapy, and meeting or exceeding national objectives.

Methods

Many meetings were held with the WA State TB Program Manager, the Nursing Consultants, the epidemiologist, the surveillance coordinator, the data entry compiler, and our CDC Consultant to ensure that everyone understood the purpose and process of cohort review. Information was gathered from the Bureau of TB Control, New York City Department of Health and Mental Hygiene, and the Charles P. Felton National Tuberculosis Center on their process, methods, and tools.

We adapted the cohort review process for WA State and decided which cohort of TB cases to

review at which point in time. A timeline was developed and decisions were made about appropriate outcome measures to evaluate, such as timeliness of lab collection and of receipt at the lab, and starting therapy after TB disease is suspected. The cohort review form was obtained from New York City and modified to meet WA State's needs and to add timeliness measurements that were felt to be of value in conducting programmatic evaluation.

Roles and responsibilities were clarified. The role of the epidemiologist was to analyze case and contact data based upon outcome measures that the TB program determined to be of importance to evaluate. For instance, in WA State, timeliness of reporting, adherence to medication, and HIV testing were added as outcome measures to the analysis. In addition, a data dictionary was created so that everyone involved in the cohort review would be familiar with the outcome measures. The TIMS and the WA State TB Contacts Database were analyzed to provide case and contact summaries.

Cohort reviews were initiated at the beginning of May 2003 and another session was conducted at the end of May with state staff including the TB Program Manager, two TB Nursing Consultants, and the state TB epidemiologist Bill Bower from the Charles P. Felton National TB Center and Judy Gibson, CDC Consultant also participated in this first cohort review. Cases counted between April and June 2002 and those counted between July and September 2002 were reviewed in May. Cases counted between October and December 2002 were reviewed at the end of July. In addition, nurse case managers as well as the TB Program Director and other staff from Seattle & King County participated in cohort review for the first time in July 2003. We wanted to become more accustomed to the cohort review process initially, so we conducted them more frequently than the quarterly New York City model. Beginning in November, 2003, cohort review sessions will occur on a quarterly basis with a review of cases counted about 8-10 months prior (for example, in November, cases counted January to March 2003 were reviewed).

The TB Nursing Consultants prepared for and presented the cases while the Program Manager served as the facilitator. Preliminary analyses of cases and contacts were provided at the beginning of the cohort review. After the cohort review sessions, the Nursing Consultants worked with the local health jurisdiction nurses to follow up on questions raised during the case

presentations. Final analyses of cases and contacts were provided for the previous cohort at the following cohort review session.

Conclusion

The implementation of cohort review in WA State has been a team effort. Extra time was required to adapt the New York City model to the needs of WA State. In addition, all staff had to be clear about the process, methods, and roles and responsibilities. It was worth the effort to have many discussions with staff. The methods and process have been altered periodically, with everyone recognizing and accepting that cohort review is a work in progress.

At the time of this writing, four cohort review sessions have taken place. Staff from Seattle & King County have collaborated with state staff to make the cohort review process comprehensive and successful. The TB Nursing Consultants have found these reviews to be helpful with state-level case oversight, especially as the cases are being reviewed and feedback is provided on treatment completion rates for cases and contacts. At the state TB meeting in October, we will be sharing this method with local health jurisdiction (LHJ) staff in order to conduct future cohort review sessions with the LHJ case managers who provide direct care of the cases.

For further questions about cohort review in WA State, please contact Trang Kuss by telephone at (360) 236-3465 or by e-mail at trang.kuss@doh.wa.gov. For additional questions about the cohort review method, please contact Bill Bower at the Charles P. Felton National Tuberculosis Center by telephone at (212) 939-8258 or by e-mail at blb3@columbia.edu.

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